

| Committee No./Name | Handbook Chapters (2010-2007) | ASHRAE Standards | Programs | | Active Research | TRPs ready for Bid | WS's in development | RTAR's accepted req'd | RTAR's in development | Recently Completed Research |
|--|--|--|--|--|--|--|---------------------|-----------------------|--|-----------------------------|
| | | | Albuquerque 2010 | June Las Vegas January 2011 | | | | | | |
| REF - Refrigeration Committee | | | Seminar 41 - Natural Refrigerants: A Roadmap to Refrigeration for the Future | Seminar 22 - Vapor-Compression Cycles, Systems and Components with Natural Refrigerants Seminar 40 - Advancing Energy Efficiency in Commercial Refrigeration | | | | | 1634-RTAR, Guide for Refrigerated Facilities and Systems' | |
| TC 1.3 - Heat Transfer & Fluid Flow | F2 - Thermodynamics and Refrigeration Cycles F3 - Fluid Flow F4 - Heat Transfer F5 - Two Phase Flow F6 - Mass Transfer F33 - Physical Properties of Materials | | Seminar 61 - Refrigeration Systems Using Environmentally-Friendly Refrigerants | Seminar 44 - Micro/Nano Fluids and Systems in HVAC&R | 1352-RP - EVAPORATION IN FLOODED CORRUGATED PLATE HEAT EXCHANGERS WITH AMMONIA AND AMMONIA/MISCIBLE OIL 1444-RP - EXPERIMENTAL EVALUATION OF TWO-PHASE PRESSURE DROPS AND FLOW PATTERNS IN U-BENDS FOR R-134a, R-410A AND AMMONIA | 1556-TRP - CHARACTERIZATION OF LIQUID REFRIGERANT FLOW EMERGING FROM A FLOODED EVAPORATOR TUBE BUNDLE | | | 1270-RP - PERFORMANCE CHARACTERISTICS OF SELECTED REFRIGERANTS IN FLAT MICRO SCALE CONDENSERS 1280-RP - MEASUREMENT AND EVALUATION OF SINGLE PHASE HEAT TRANSFER AND PRESSURE DROP INSIDE ENHANCED TUBES FOR TRANSITION | |
| TC 3.1 - Refrigerants & Secondary Coolants | F29 - Refrigerants F30 - Thermophysical Properties of Refrigerants F31 - Physical Properties of Secondary Coolants (Brines) | Standard 34 - Designation and Safety Classification of Refrigerants Standard 177P - Method of Test for Measuring Fractionated Compositions of Refrigerant Blends Guideline 6 - Refrigerant Information Recommended for Product Development and Standards | Seminar 41 - Natural Refrigerants: A Roadmap to Refrigeration for the Future | Seminar 6 - Building a Sustainable Future by Removing Barriers for Low GWP Seminar 11 - Cradle to Grave Refrigerant Management Seminar 22 - Vapor-Compression Cycles, Systems and Components with Natural Refrigerants | 1484-RP - ENERGY AND PERFORMANCE OF SECONDARY COOLANT LOW-TEMPERATURE REFRIGERATION SYSTEMS 1507-RP - BINARY REFRIGERANT FLAME BOUNDARY CONCENTRATIONS 1583-RP - ASSESSMENT OF BURNING VELOCITY TEST | 1580-TRP - STUDY OF INPUT PARAMETERS FOR RISK ASSESSMENT OF 2L FLAMMABLE REFRIGERANTS IN RESIDENTIAL AIR CONDITIONING AND SMALL COMMERCIAL REFRIGERATION APPLICATIONS 1584-TRP - ASSESSMENT OF ALTERNATIVE APPROACHES TO PREDICTING THE | | | | |
| TC 3.2 - Refrigerant System Chemistry | R05 - Component Balancing in Refrigeration Systems | Standard 97 - Sealed Glass Tube Method to Test the Chemical Stability of Materials for Use Within Refrigerant Systems Standard 175P - Metal Pressure Vessel Method to Test Materials Used in Refrigeration Systems Standard 177P (Co-C) - Method of Test for Measuring Fractionated Compositions of Refrigerant Blends | | | 1409-RP - STABILITY OF CANDIDATE LUBRICANTS FOR CO2 REFRIGERATION | 1410-TRP - EFFECT OF SYSTEM CHEMICALS TOWARDS THE BREAKDOWN OF LUBRICANTS AND REFRIGERANTS | | | | |
| TC 3.3 - Refrigerant Contamination Control | R07 - Control of Moisture and Other Contaminants in Refrigeration Systems | Standard 35 - Method of Testing Desiccants for Refrigerant Drying Standard 63.1 - Method of Testing Liquid-Line Refrigerant Driers Standard 63.2 - Method of Testing Liquid-Line Filter-Drier Filtration Capability Standard 78 - Method of Testing Flow Capacity of Suction Line Filters and Filter-Driers | | | | 1495-TRP - EFFECT OF LUBRICANT ON THE DISTRIBUTION OF WATER BETWEEN THE VAPOR AND LIQUID PHASES OF REFRIGERANTS | | | | |

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| TC 3.8 - Refrigerant Containment | R09 - Refrigerant Containment, Recovery, Recycling, and Reclamation | Standard 147 - Reducing the Release of Halogenated Refrigerants from Refrigerating and Air-Conditioning Equipment and Systems Standard 173P - Method of Test to Determine the Performance of Halocarbon Refrigerant Leak Detectors Standard 196P - Method of Test for Measuring Refrigerant Leak Rates | - | - | Seminar 11 - Cradle to Grave Refrigerant Management | - | - | - | - | 1599-RTAR - ASSESSMENT OF MEASUREMENT TECHNIQUES FOR LEAK FLOW RATE (LFR) OF COMPONENTS AND SYSTEMS | - | |
| TC 8.1 - Positive Displacement Compressors | R08 - Equipment and System Dehydrating, Charging and Testing S37 - Compressors S42 - Liquid-Chilling Systems | Standard 23.1 - Methods of Testing for Performance Rating Positive Displacement Refrigerant Compressors and Condensing Units That Operate | Seminar 50 - Electrical Safety and Regulatory Requirements and Application for Positive Displacement Compressors | Seminar 22 - Vapor-Compression Cycles, Systems and Components with Natural Refrigerants | - | - | - | - | - | - | - | |
| TC 8.2 - Centrifugal Machines | S37 - Compressors S42 - Liquid-Chilling Systems | Standard 30 - Methods of Testing Liquid Chilling Packages Standard 184P - Method of Test for Field Test of Liquid-Chilling Packages Guideline 22 (Co-C) - Instrumentation for Monitoring Central Chilled Water Plant Efficiency | - | - | 1476-RP - WOVEN COMPRESSOR ENABLING ECONOMIC AND SCALABLE R718 CHILLERS - PHASE 1: PROOF OF CONCEPT | - | - | - | - | - | - | |
| TC 8.3 - Absorption & Heat Operated Machines | F2 - Thermodynamics and Refrigeration Cycles R18 - Absorption Equipment | Standard 40 - Methods of Testing for Rating Heat Operated Unitary Air-Conditioning and Heat-Pump Equipment | - | Seminar 46 - Achieving Zero Energy Design with Absorption Cooling | - | 1462-TRP - ACTIVE MECHANISMS FOR ENHANCING HEAT AND MASS TRANSFER IN SORPTION FLUIDS | - | - | - | - | - | |
| TC 8.4 - Air-to-Refrigerant Heat Transfer Equipment | R14 - Forced Circulation Air Coolers S22 - Air-Cooling and Dehumidifying Coils S26 - Air-Heating Coils S38 - Condensers | Standard 182 - Method of Testing for Rating Remote Mechanical-Draft Air-Cooled Refrigerant Condensers Standard 25 - Methods of Testing Forced Convection and Natural Convection Air Coolers for Refrigeration | Seminar 31, TC Forum - Next Generation Heat Exchangers for Net-Zero Design | 1589-RP - EFFECTS OF FIN DESIGN ON FROST AND DEFROST THERMAL PERFORMANCES OF MICRO-CHANNEL HEAT EXCHANGERS | - | 1564-TRP - MEASUREMENT OF OIL RETENTION IN THE MICROCHANNEL HEAT EXCHANGER | 1535-WS - A HEAT TRANSFER AND FRICTION FACTOR CORRELATION FOR LOW AIR-SIDE REYNOLDS NUMBER APPLICATIONS OF COMPACT HEAT EXCHANGERS | 1577-RTAR - TUBE-TO-TUBE CONDUCTION EFFECTS IN FINNED TUBE HEAT EXCHANGERS | - | - | - | |
| TC 8.5 - Liquid to Refrigerant Heat Exchangers | S38 - Condensers S41 - Liquid Coolers | Standard 22 - Methods of Testing for Rating Water-Cooled Refrigerant Condensers Standard 24 - Methods of Testing for Rating Liquid Coolers Standard 30 (Co-C) - Methods of Testing Liquid Chilling Packages Standard 181P - Methods of Testing Liquid-to-Liquid Heat Exchangers for Heating, Air-Conditioning, and Refrigeration Applications | Seminar 61 - Refrigeration Systems Using Environmentally-Friendly Refrigerants | Seminar 44 - Micro/Nano Fluids and Systems in HVAC&R | 1316-RP - EXPERIMENTAL EVALUATION OF THE HEAT TRANSFER IMPACTS OF TUBE PITCH IN A HIGHLY ENHANCED SURFACE TUBE BUNDLE 1345-RP - WATERSIDE FOULING PERFORMANCE OF BRAZED-PLATE TYPE CONDENSERS IN COOLING TOWER APPLICATIONS | - | - | - | - | - | 1394-RP - STUDY OF CARBON DIOXIDE CONDENSATION IN A CHEVRON ANGLE PLATE GEOMETRY EXCHANGER | |
| TC 8.9 - Residential Refrigerators & Food Freezers | R17 - Household Refrigerators and Freezers | - | - | - | 1320-RP - THE IMPACT OF HOUSEHOLD REFRIGERATOR STORAGE CONDITIONS ON SHELF-LIFE OF FRUITS AND VEGETABLES | - | - | - | - | - | - | |

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| TC 10.1 - Custom Engineered Refrigeration Systems | R04 - Liquid Overfeed Systems R05 - Component Balancing in Refrigeration Systems R13 - Secondary Coolants in Refrigeration Systems R45 - Concrete Dams and Subsurface Soils R46 - Refrigeration in the Chemical Industry R50 - Terminology of Refrigeration | Standard 15 - Safety Standard for Refrigeration Systems | Seminar 54 - Ratings vs. Actual Performance in Refrigeration | - | - | - | - | - | - | - | - | |
| TC 10.2 - Automatic Icemaking Plants and Skating Rinks | R43 - Ice Manufacture R44 - Ice Rinks | - | - | - | - | - | - | - | - | - | - | |
| TC 10.3 - Refrigerant Piping | R01 - Halocarbon Refrigeration Systems R02 - Ammonia Refrigeration Systems R03 - Carbon Dioxide Refrigeration Systems R10 - Insulation Systems for Refrigerant Piping | - | - | - | - | 1327-RP - FLOW REGIME AND PRESSURE DROP DETERMINATION FOR TWO-PHASE AMMONIA UPWARD FLOW IN VARIOUS RISER SIZES 1356-RP w/TC 1.8 - METHODOLOGY TO MEASURE THERMAL PERFORMANCE OF PIPE INSULATION AT BELOW-AMBIENT TEMPERATURES | - | - | - | 1569-RTAR - CFD STUDY OF HYDRAULIC SHOCK IN TWO-PHASE ANHYDROUS AMMONIA | - | |
| TC 10.4 - Ultra Low Temperature Systems & Cryogenics | R47 - Cryogenics R48 - Ultralow-Temperature Refrigeration R49 - Biomedical Applications of Cryogenic Refrigeration | - | - | - | - | 1472-RP - EXPERIMENTAL VALIDATION OF MODELING TOOLS FOR MIXED GAS REFRIGERATION CYCLES | 1602-TRP - THERMAL-FLUID BEHAVIOR OF MIXED REFRIGERANTS FOR CRYOGENIC APPLICATIONS | - | - | - | - | |
| TC 10.5 - Refrigerated Distribution and Storage Facilities | R21 - Commodity Storage Requirements R23 - Refrigerated Facility Design | - | Seminar 44 - Energy Efficiency Impacts of New Codes and Standards for Refrigerated Facilities | Forum 4 - The Technical Basis of the Federal Walk-In Efficiency Standard | - | - | - | - | - | - | - | |
| TC 10.6 - Transport Refrigeration | R25 - Cargo Containers, Rail Cars, Trailers, and Trucks R26 - Marine Refrigeration R27 - Air Transport | Standard 26 - Mechanical Refrigeration and Air Conditioning Installations Aboard Ship | - | - | - | - | - | - | - | - | - | |
| TC 10.7 - Commercial Food and Beverage Cooling Display and Storage | R15 - Retail Food Store Refrigeration and Equipment R16 - Food Service and General Commercial Refrigeration Equipment | - | Seminar 41 - Natural Refrigerants: A Roadmap to Refrigeration for the Future | Forum 4 - Forum 4 - The Technical Basis of the Federal Walk-In Efficiency Standard Seminar 40 - Advancing Energy Efficiency in Commercial Refrigeration | - | 1467-RP - BALANCING LATENT HEAT LOAD BETWEEN DISPLAY CASES AND STORE COMFORT COOLING | - | - | - | - | 1402-RP - COMPARISON OF VERTICAL DISPLAY CASES | |
| TC 10.8 - Referation Load Calculations | R24 - Refrigerated Facility Loads | - | - | Seminar 8 - Controls for Central Chiller Plant Optimization | - | - | - | - | - | - | - | |

